
Ball and Socket Joint, Preferably for Use in Vehicles

Patent Claims

1. A ball and socket joint, preferably for use in vehicles, especially in the area of the chassis of motor vehicles, with a A ball and socket joint housing having a joint opening, with a ball pivot, which is arranged in the A ball and socket joint housing, extends through the joint opening and with which a shaft is made integral, with a support ring arranged on the shaft of the ball pivot and with a sealing element, which is arranged between the support ring and a connection component surrounding the shaft of the ball pivot, **characterized in that** the sealing element is designed as an elastically and/or plastically deformable profiled body (15), whose effective cross section, which is free from the effect of forces, is limited by a continuously extending, curved contour (19), which is subject to deformation in the installed state, as a result of which at least a partial area of said contour (19) is in contact with adjoining areas (10, 13, 14) that are to be sealed.

2. A ball and socket joint in accordance with claim 1, characterized in that said elastically and/or plastically deformable profiled body (15) has a profiled basic body (16) and sealing segments (18).

3. A ball and socket joint in accordance with claim 2, characterized in that said sealing segments (18) extend radially oriented in relation to said profiled basic body (16).

4. A ball and socket joint in accordance with claim 2 or 3, characterized in that transition areas (17) are provided for connecting said profiled basic body (16) to said sealing segments (18).

5. A ball and socket joint in accordance with claim 4, characterized in that a material or a material combination that permits elastic deflection of said sealing segments (18) adjoining said transition area (17) is selected for said transition area (17).

6. A ball and socket joint in accordance with one of the above claims, characterized in that said profiled body (15) has a connection surface, via which said profiled body (15) is connected to an adjoining component (5, 13).

7. A ball and socket joint in accordance with claim 6, characterized in that said adjoining component is said support ring (5).

8. A ball and socket joint in accordance with claim 6 or 7, characterized in that the connection between said profiled body (15) and said adjoining component (5, 13) is established by vulcanization or bonding.

9. A ball and socket joint in accordance with claim 6, characterized in that said profiled body (15) is positioned on said ball pivot (1) or said support ring (5) in preparation for the mounting of said A ball and socket joint.

10. A ball and socket joint in accordance with claim 9, characterized in that said profiled body (15) is positioned on said component (1, 10, 5, 13) in question as a result of a radial expansion of said profiled body (15) by positive-locking connection or non-positive connection.

11. A ball and socket joint in accordance with claim 1, characterized in that said support ring (5) has a radially extending flange (13), with which at least one said sealing segment (18) of said profiled body (15) is in contact under pretension.

12. A ball and socket joint in accordance with claim 1 or 11, characterized in that said support ring (5) has a radially extending flange (13), with a radially outer front surface (20) of which at least one said sealing segment (18) of said profiled body (15) is in contact under pretension.

13. A ball and socket joint in accordance with one of the above claims, characterized in that said profiled body (15) has at least one stabilizing element (21).